ABSTRACT OF THE DISCLOSURE

An RSVP node that has crashed and restarted sends a non-zero Recovery Time value in a Restart_Cap object of a Hello message. Other nodes receiving such messages can detect, based on the non-zero Recovery Time value, that the sending node is restarting. In particular, a first RSVP node can detect whether a second, neighbor node has restarted regardless of the order of restart with respect to the first and second nodes. As a result, the first node can determine whether to forward PATH messages with Recovery Label or Suggested Label, as appropriate or necessary to rebuild label-switched paths with crashed and restarted nodes. Therefore, when multiple RSVP nodes crash relatively concurrently, the multiple nodes can restart gracefully and automatically detect what kind of communication to use in order to rebuild label-switched paths among themselves.

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